

Application No. 10/532,957
AMENDMENT of October 4, 2010
Reply to Office Action of April 5, 2010

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A construction material comprising: on
a plant basis (PB) plant-based component, said plant-based component is added in a
volume sufficient to be an aggregate for said construction material, containing
a mixture M1 of a hydraulic binder and a mineralizer,
wherein the weight proportions of the components constituting the mixture M1 comprise
between approximately 50 wt% and approximately 90 wt% of the hydraulic binder and
between approximately 10 wt% and approximately 50 wt% of the mineralizer, and
the mineralizer is comprised of a mixture M2 of calcium carbonate CaCO_3 and
magnesium carbonate MgCO_3 , the weight proportions of the components constituting the
mixture M2 comprise
between approximately 60 wt% and approximately 95 wt% of the CaCO_3 and
between approximately 5 wt% and approximately 40 wt% of the MgCO_3 .

2. (Currently Amended) The construction material according to claim 1, wherein the
weight proportions of the components constituting the mixture M1 comprise between 6/10 and
4/5 of the binder and between 1/5 and 4/10 of the mineralizer.

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3. (Currently Amended) The construction material according to claim 1 characterized in that wherein the ~~weight~~ proportions of the components constituting the mixture M2 comprise between 2/3 and 9/10 of the CaCO₃ and between 1/10 and 1/3 of the MgCO₃.

4. (Currently Amended) Construction material according to claim 1, wherein for 1 m³ of ~~PB~~ plant-based component, the mixture M1 is comprised of 75 kg of mineralizer M2 and of 225 kg of binder in ~~weight~~ proportion of 25 wt% to 75 wt%, and the mixture M2 of 60 kg of calcium carbonate and of 15 kg of magnesium carbonate in ~~weight~~ proportions 80 wt% to 20 wt%.

5. (Previously Presented) The construction material according to claim 1, further comprising an additional mixture M3 provided in defined application-oriented dependent proportions.

6. (Currently Amended) The construction material according to claim 5, wherein the mixture M3 comprises gypsum ~~preferably with starch added~~.

7. (Previously Presented) The construction material according to claim 5, wherein the mixture M3 comprises a flow agent.

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8. (Currently Amended) The construction material according to claim 5 wherein for 1 m³ of PB plant-based component, the mixture M1 is comprised of 60 kg of mineralizer according to M2 and of 100 kg of binder in weight proportions 37.50 wt% to 62.50 wt%, and the mixture M2 of 42 kg of calcium carbonate and of 18 kg of magnesium carbonate in weight proportions 70 wt% to 30 wt%, and the mixture M3 comprises 200 kg of gypsum.

9. (Currently Amended) The construction material according to claim 1, wherein the PB plant-based component comprises materials comprising miscanthus (China reed), hemp, softwood, sugar cane, straw, switchgrass or panicum virgatum, italian Italian ryegrass, reed, the materials being present individually or in different combinations, wherein the materials are comminuted.

10. (Currently Amended) The construction material according to claim 9, wherein the comminuted particles are elongate particles comprising at least one of fibers of up to approximately approx. 40 mm and a granulate of a grain size up to 8 mm.

11. (Currently Amended) The construction material according to claim 9, wherein the PB plant-based component comprises a mixture of miscanthus and softwood, with respective volumetric contents of 85 % and 15 % by volume.

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12. (Currently Amended) The construction material according to claim 9 wherein the PB plant-based component comprises a mixture of miscanthus, softwood, and hemp, with respective volumetric contents of 75 %, 20 %, and 5 % by volume.

13. (Currently Amended) The construction material according to claim 1, wherein the mixture of plant-based component and the mixture [[PB +]] M1 is mixed with a quantity of mixing water to produce a consistency K_i, wherein K_i equals the stiffness of the fresh concrete moister than moist earth and loose when shaken.

14. (Currently Amended) The construction material according to claim 13, wherein for 1 m³ of PB plant-based component, the quantity of mixing water is approximately 300 liters.

15. (Currently Amended) The construction material according to claim 14, further comprising a fungicide fungicidal preparation admixed with the mixing water, by addition of approximately approx. 2/3 liters of sodium hydroxide for 1,000 liters of mixing water.

16. (Currently Amended) The construction material according to claim 1, wherein the binder is Portland cement of a standardized grade, said standardized grade being strength class 52.5.

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17. (Withdrawn) A method for producing a construction material wherein the construction material comprises a plant basis (PB), containing a mixture M1 of a binder and a mineralizer, wherein the weight proportions of the components constituting the mixture M1 comprise between approximately 50% and approximately 90% of the binder and between approximately 10% and approximately 50% of the mineralizer, and the mineralizer is comprised of a mixture M2 of calcium carbonate CaCO_3 and magnesium carbonate MgCO_3 , the weight proportions of the components constituting the mixture M2 comprise between approximately 60% and approximately 95% of the CaCO_3 and between approximately 5% and approximately 40% of the MgCO_3 and an additional mixture M3 provided in defined application-oriented dependent proportions;

the method comprising:

preparing the mixture M2 comprised of calcium carbonate CaCO_3 and magnesium carbonate MgCO_3 in defined application-oriented dependent proportions,

preparing the mixture M3 further comprising at least one additional material in defined application-oriented proportions and admixed with the mixture M2, and

preparing the mixture M1 of the binder and the mineralizer in defined application-oriented dependent proportions,

mixing the mixture PB + M1 + M3 into a quantity of mixing water that is defined according to a desired consistency K_i .

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18. (Withdrawn) The method for producing a construction material according claim 7, wherein

the mixture M2 comprised of calcium carbonate CaCO_3 and magnesium carbonate MgCO_3 is prepared according to defined application-oriented proportions,

the mixture M3 comprising at least one additional material is prepared in defined application-oriented proportions and admixed with the mixture M2, and

- the mixture M1 is comprised of the binder and the mineralizer prepared according to defined application-oriented dependent proportions,

the mixture $\text{PB} + \text{M1} + \text{M3}$ is extruded.

19. (Withdrawn) The method according to claim 17, wherein the preparation of the mixture $\text{PB} + \text{M1} + \text{M3}$ takes place in a single process step, and the mineralizer and the mixture M3 are previously admixed with the binder directly in the binder plant according to determined specifications.

20. (Withdrawn) A structural element or object comprised of a construction material according to claim 1.

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21. (Withdrawn) The structural element according to claim 20, in the form of a sound-insulating element and being provided with sound-insulating fins for increasing a sound-absorbing surface area thereof.

22. (Withdrawn) A sound-insulating structural element according to claim 21, in the form of a panel.

23. (Withdrawn) A sound-insulating structural element according to claim 21, wherein being built up of two layers, including a supporting layer having a preponderantly static function and an absorber layer for sound absorption.

24. (Withdrawn) A sound-insulating structural element according to claim 23, having a thickness (h) of approximately 25 cm, the supporting layer having a density of approximately 1250 kg/m³ and having a thickness (g) of approximately 10 cm, the absorber layer having a density of approximately 500 kg/m³ and being built up of fins, the fins having bases and heads, the fins having a height of approximately 10 cm, a width of approximately 10 cm at the fin bases a width of approximately 6 cm at a fin head and a distance between the fins of approximately 3 cm at the fin bases, and of a layer beneath the fins of a thickness of approximately 5 cm, and the total weight of the structural element related to the projected surface area, is approx. 205 kg/m².

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25. (Withdrawn) The structural element according to claim 20, comprising a cuboidal slope reinforcement block a tenon and a groove provided for form-fitting juxtaposition of several slope reinforcement blocks and a recess provided on a side facing the soil and capable of being filled up by earth.

26. (Withdrawn) The structural element according to claim 25, wherein the slope reinforcement block further comprises sound-absorbing fins provided on the side of the slope reinforcement block opposite the soil.

27. (Withdrawn) A slope reinforcement wall comprised of a plurality of the structural elements in the form of the slope reinforcement blocks according to claim 25, wherein several of the slope reinforcement blocks arranged to form a slope reinforcement wall by form-fitting interconnection thereof, and the wall is inclined in the direction of the slope of the blocks by an angle with respect to the perpendicular, and a foundation for absorbing vertical forces, and geo fleece mats and tension bands for absorbing horizontal forces from the slope reinforcement wall.

28. (Withdrawn) The slope reinforcement wall according to claim 27, wherein the angle is 10°.

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29. (Withdrawn) The structural element according to claim 20, which is pressed to form a perforated building brick.

30. (Withdrawn) The structural element according to claim 20, further comprising hemp ropes of a diameter of approx. 12 mm arranged at intervals of approx. 10 cm, hemp ropes of a diameter of approx. 8 mm provided at intervals of approx. 30 cm, and the structural elements have a length of approx. 3.5 m and are applicable as ceiling elements.

31. (Withdrawn) The structural element according to claim 20, further comprising a timber framing for fulfilling a static function of the structural element, and the plant-based construction material fills up the timber framing two-dimensionally and performs a thermal insulation and noise protection function.